

oxidizable material such as aluminum, tantalum, titanium, and silicon, is used as the coating material. Moreover, a monolayered gate electrode using one of the above materials as well as a multilayered gate electrode comprising two layers or more of the above materials can be utilized. As shown in Fig. 9, for example, a double layered structure comprising titanium silicide 901 formed on aluminum 902 or a double layered structure comprising aluminum 901 formed on titanium nitride 902 can be used. Each of the layers is provided at a thickness depending on the device characteristics.--

IN THE CLAIMS:

Please cancel claim 40 and amend claims 1, 6, 11, 16, 19 and 37 as follows:

1. (Amended) A semiconductor device comprising:
- an active matrix circuit having at least one first thin film transistor formed over a substrate; and
 - a driving circuit having at least one second thin film transistor formed over the substrate for driving said active matrix circuit, each of said first and second thin film transistors comprising:
 - a gate electrode;
 - a gate insulating film adjacent to the gate electrode; and
 - a semiconductor film adjacent to said gate insulating film wherein said semiconductor film includes a channel forming region, a pair of first regions containing an impurity for giving one conductivity type thereto with said channel forming region therebetween, and a pair of second regions in which a concentration of said impurity is smaller than that in said first regions wherein said second regions are interposed between said channel forming region and said pair of first regions,
- wherein the pair of second regions of said second thin film transistor are overlapped with the gate electrode of said second thin film transistor;
- wherein a distance between the channel forming region and the pair of first regions of said first thin film transistor is greater than that of said second thin film transistor.

6. (Amended) A semiconductor device comprising:
- an active matrix circuit having at least one first thin film transistor formed over a substrate; and
 - a driving circuit having at least one second thin film transistor formed over the substrate for driving said active matrix circuit, each of said first and second thin film transistors comprising:
 - gate electrode;
 - a gate insulating film adjacent to the gate electrode; and
 - a semiconductor film adjacent to said gate insulating film wherein said semiconductor film includes a channel forming region, a pair of first regions containing an impurity for giving one conductivity type thereto with said channel forming region therebetween, and a pair of second regions in which a concentration of said impurity is smaller than that in said first regions wherein said second regions are interposed between said channel forming region and said pair of first regions,
- wherein the pair of second regions of said second thin film transistor are overlapped with the gate electrode of said second thin film transistor and a distance between the channel forming region and the pair of first regions in said first thin film transistor is within a range of 0.4 to 2 μm ;
- wherein a distance between the channel forming region and the pair of first regions of said first thin film transistor is greater than that of said second thin film transistor.

11. (Amended) A semiconductor device comprising:
- an active matrix circuit having at least one first thin film transistor formed over a substrate; and
 - a driving circuit having at least one second thin film transistor formed over the substrate for driving said active matrix circuit, each of said first and second thin film transistors comprising:
 - a gate electrode;
 - a gate insulating film adjacent to the gate electrode; and

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a semiconductor film adjacent to said gate insulating film wherein said semiconductor film includes a channel forming region, a pair of first regions containing an impurity for giving one conductivity type thereto with said channel forming region therebetween, and a pair of second regions in which a concentration of said impurity is smaller than that in said first regions wherein said second regions are interposed between said channel forming region and said pair of first regions,

an insulating film comprising silicon oxide over the gate electrode;

wherein the pair of second regions of said second thin film transistor are overlapped with the gate electrode of said second thin film transistor and a distance between the channel forming region and the pair of first regions in said first thin film transistor is greater than that of said second thin film transistor.

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16. (Amended) A semiconductor device comprising:

an active matrix circuit having at least one first thin film transistor formed over a substrate; and

a driving circuit having an inverter circuit comprising at least a second and third thin film transistors formed over the substrate for driving said active matrix circuit, at least one of said second and third thin film transistors comprising:

a gate electrode;

a gate insulating film adjacent to the gate electrode; and

a semiconductor film adjacent to said gate insulating film wherein said semiconductor film includes a channel forming region, a pair of first regions containing an impurity for giving one conductivity type thereto with said channel forming region therebetween, and a pair of second regions in which a concentration of said impurity is smaller than that in said first regions wherein said second regions are interposed between said channel forming region and said pair of first regions,

wherein the pair of second regions are overlapped with the gate electrode of said second thin film transistor;

wherein a distance between the channel forming region and the pair of first regions of said first thin film transistor is greater than that of said second thin film transistor.

19. (Amended) A semiconductor device comprising:
an active matrix circuit having at least one first thin film transistor formed over a substrate;
a driving circuit having an inverter circuit comprising at least a second and third thin film transistors formed over the substrate for driving said active matrix circuit, at least one of said second and third thin film transistors comprising:
a gate electrode;
a gate insulating film adjacent to the gate electrode; and
a semiconductor film adjacent to said gate insulating film wherein said semiconductor film includes a channel forming region, a pair of first regions containing an impurity for giving one conductivity type thereto with said channel forming region therebetween, and a pair of second regions in which a concentration of said impurity is smaller than that in said first regions wherein said second regions are interposed between said channel forming region and said pair of first regions,
wherein the pair of second regions are overlapped with the gate electrode of said second thin film transistor and a distance between the channel forming region and the pair of first regions in said first thin film transistor is within a range of 0.4 to 2 μm ;
wherein a distance between the channel forming region and the pair of first regions of said first thin film transistor is greater than that of said second thin film transistor.

37. (Amended) A semiconductor device comprising:
at least one first thin film transistor formed over a substrate;
a pixel electrode electrically connected to said first thin film transistor;
a driving circuit having at least one second thin film transistor formed over the substrate for driving first thin film transistor, each of said first and second thin film transistors comprising:
a gate electrode;
a gate insulating film adjacent to the gate electrode; and

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a crystalline semiconductor film adjacent to said gate insulating film wherein said crystalline semiconductor film includes a channel forming region, a pair of first regions containing an impurity for giving one conductivity type thereto with said channel forming region therebetween, and a pair of second regions in which a concentration of said impurity is smaller than that in said first regions wherein said second regions are interposed between said channel forming region and said pair of first regions,

wherein the pair of second regions of said second thin film transistors are overlapped with the gate electrode of said second thin film transistor;

wherein a distance between the channel forming region and the pair of first regions of said first thin film transistor is greater than that of said second thin film transistor.

Please add new claim 42 as follows:

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-- 42. A semiconductor device comprising:

an active matrix circuit having at least one first thin film transistor formed over a substrate; and

a driving circuit having at least one second thin film transistor formed over the substrate for driving said active matrix circuit, each of said first and second thin film transistors comprising:

a gate electrode;

a gate insulating film adjacent to the gate electrode; and

a semiconductor film adjacent to said gate insulating film wherein said semiconductor film includes a channel forming region, a pair of first regions containing an impurity for giving one conductivity type thereto with said channel forming region therebetween, and a pair of second regions in which a concentration of said impurity is smaller than that in said first regions wherein said second regions are interposed between said channel forming region and said pair of first regions,

an insulating film comprising silicon nitride over the gate electrode;

wherein the pair of second regions of said second thin film transistor are overlapped with the gate electrode of said second thin film transistor;

wherein a distance between the channel forming region and the pair of
first regions of said first thin film transistor is greater than that of said second thin film
transistor.--

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